

## REMARKS

Claims 1, 6, 11 and 16 are amended. Claims 76, 79, 82 and 85 are cancelled. Claims 1, 4-6, 9-11, 14-16, 19, 20, 65-75, 77, 78, 80, 81, 83, 84 and 86 are in the application for consideration.

Independent claims 1, 6, 11 and 16 have been amended to delete the reference to  $C_3F_6$ . Further, dependent claims 76, 79, 82 and 85 previously reciting  $C_3F_6$  have been cancelled. Independent claims 1, 6, 11 and 16 have also been amended to recite in the body of the claim that the composition constitutes a boron and/or phosphorus doped silicon dioxide selective to undoped  $SiO_2$  and  $Si_3N_4$  etchant gas composition. Such is believed to obviate the Examiner's rejection as respects the independent claim preambles.

Chu et al. is understood to teach an etchant gas composition for selectively etching BPSG relative to  $TiSi_2$ . However, independent claim 1 recites an etchant gas composition for etching a boron and/or phosphorus doped silicon dioxide selective relative to undoped  $SiO_2$  and  $Si_3N_4$ .  $TiSi_2$  is neither  $SiO_2$  nor  $Si_3N_4$ . Therefore, the Chu et al. patent is not material to Applicant's independent claim 1 as amended. Accordingly, the combined rejection with Kuehne et al. is improper for at least this reason, and the rejection should be withdrawn. Further, Chu et al. in no way discloses Applicant's claimed etchant gas composition having at least one of  $C_4F_6$  and  $C_5F_8$ .

Kuehne et al. is relied upon as disclosing an etchant gas composition comprising  $CH_2F_2$  and  $C_4F_6$ . It is noted that Kuehne et al. also discloses  $C_5F_8$  as a substitute for  $C_4F_6$ . However, the etch teaching of Kuehne et al. is relative to

etching its silicon dioxide materials 148, 248, 448 and 548. However, such materials are taught to be oxide deposited by decomposition of tetraethylorthosilicate (TEOS) using HDPCVD (col.2, Ins.9-12). But, such a material is NOT boron and/or phosphorus doped silicon dioxide, and in fact, is undoped silicon dioxide. Accordingly, any teaching from the Kuehne et al. process is only material to etchant compositions for etching undoped silicon dioxide. On the other hand, Applicant's composition is relative to etching doped selective to undoped silicon dioxide, essentially stating not etching the very material which Kuehne et al. says is etched using its composition. Thus, Kuehne et al. teaches the exact opposite of that which Applicant recites, and its teachings are not material to etchant compositions for etching doped silicon dioxide. Accordingly, such would not be properly combined with Chu et al. in a rejection of Applicant's amended claim 1, and even if so done, does not suggest or render obvious Applicant's amended independent claim 1.

For at least these reasons, Applicant's amended independent claim 1 is allowable over Chu et al. in view of Kuehne et al., and action to that end is requested.

Independent claims 6 and 11 also stand rejected as being obvious over a combination of Chu et al. and Kuehne et al. Such should be allowed essentially for the reasons argued above with respect to the allowability of claim 1, and in reciting a gas consisting essentially of the stated components which is not shown nor suggested by the combination of Chu et al. and Kuehne et al. Action to that end is requested.

Independent claim 16 stands rejected as being obvious over Kuehne et al. Such claim should be allowed for the reasons argued above with respect to the distinction of Kuehne et al. as a reference relative to claim 1. Specifically, Kuehne et al.'s composition constitutes a composition for etching undoped silicon dioxide, whereas Applicant's composition constitutes one for etching boron and/or phosphorus doped silicon dioxide selective to undoped SiO<sub>2</sub> and Si<sub>3</sub>N<sub>4</sub>. Thus, Kuehne et al. teaches the exact opposite of that which Applicant recites, and its teachings are not material to etchant compositions for etching doped silicon dioxide. As the reference teaches away from Applicant's independent claim 16, it clearly could not suggest such. Accordingly, claim 16 should be allowed.

Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. Action to that end is requested.

On October 28, 2002, a Supplemental Information Disclosure Statement (including Form PTO 1449 and copies of the cited art references) was submitted. The undersigned has not yet received a copy of an initialed version of Page 4 (of 8 total pages) of that Form PTO-1449. Additionally, a foreign reference on Sheet 2, JP 4-360670, of that same Form PTO-1449 was not initialed. Therefore, a copy of said Supplemental Information Disclosure Statement is resubmitted herewith together with the accompanying Form PTO-1449. Also enclosed is a copy of the Form PTO-1449 as attached to the Office Action of February 27, 2003, showing the uninitialed citation on Sheet 2, and the

uninitialed Sheet 4 of the Form PTO-1449. It is requested that the Examiner consider the submitted art and initial the same on this previously submitted Supplemental Information Disclosure Statement and print it on the face of any resulting patent. Such is not seen to be discretionary by the Examiner. MPEP § 609(D).

This application is believed to be in immediate condition for allowance, and action to that end is requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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